Permit Fact Sheet

General Information

Permit Number:	WI-0064386-03-1
Permittee Name:	Ruedinger Farms, Inc.
Address:	W7222 Cemetary Rd, Van Dyne, WI 54979
Permit Term:	March 01, 2025 to September 30, 2026
Discharge Location:	W7222 Cemetery Road; Town of Friendship; Fond du Lac County, WI; Section 18, T16N, R17E
Receiving Water:	Surface Water and Groundwater within the Van Dyne Creek-Lake Winnebago Watershed in the Upper Fox River Drainage Basin

Animal Units					
	Current AU		**Proposed AU** (Note: If all zeroes, expansions are not expected during permit term)		
Animal Type	**Mixed**	**Individual**	**Mixed**	**Individual**	**Date of Proposed Expansion**
Dairy Calves (under 400 lbs.)	44	0	0	0	
Milking and Dry Cows	2234	2282	0	0	
Heifers (400 lbs. to 800 lbs.)	120	200	0	0	
Total	2398	2282	0	0	

Facility Description

Ruedinger Farms, Inc. is a Concentrated Animal Feeding Operation (CAFO) owned and Operated by John Ruedinger. It currently has 2,398 animal units and based on current herd size, Ruedinger Farms has approximately 313 days of manure and waste storage. Ruedinger Farms generates approximately 19,000,000 gallons liquid manure/process wastewater and 9,000 tons of solid waste annually and currently has 3,963 acres (710 owned, and 3,253 controlled through contracts, rental agreements or leases, or under manure agreements) of which 3,843 are spreadable acres.

Ruedinger Farms requested a modification to its WPDES permit to accommodate the construction and use of a digester waste treatment system. New sample points describing these facilities have been added to the permit. Only aspects of the modification action are subject to the public input process. This includes the addition of sample point 017 and update of sample point 016.

Substantial Compliance Determination

Enforcement During Last Permit: None

After a desktop review of all Ruedinger Farm's discharge monitoring reports, CMARs, land app reports, compliance schedule items, this facility has been found to be in substantial compliance with their current permit.

Sample Point Designation For Animal Waste		
Sample Point Number	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**	
001	WSF 1: Sample point 001 is for liquid waste storage facility 1 (WSF 1). WSF 1 is an earthen lined storage with a concrete channel located east of WSF 2. The facility has an approximate capacity (MOL) of 2.10 million gallons and was constructed in 2003. This storage accepts manure and process wastewater from the freestall barns and feed storage collection areas. WSF 1 will require an engineering evaluation, see Schedules section for due dates.	
002	Settled Solids: Sample point 002 is for any manure solids removed from bottom of liquid waste storage facilities. This includes manure-laden sand solids, manure fiber solids, etc. Representative samples shall be taken from each waste storage facility.	
003	WSF 2: Sample point 003 is for liquid waste storage facility 2 (WSF 2). WSF 2 is an earthen lined storage located west of WSF 1. The facility has an approximate capacity (MOL) of 2.29 millions gallons and was constructed in 1996. This storage accepts manure and process wastewater from WSF 1 via a concrete weir. WSF 2 will require an engineering evaluation, see Schedules section for due dates.	
005	WSF 3: Sample point 005 is for liquid waste storage facility 3 (WSF 3). WSF 3 is an earthen lined storage located south of WSF 1 and WSF 2. The facility has an approximate capacity (MOL) of 6.50 million gallons and was constructed in 2007. This storage accepts manure and process wastewater from WSF 2. WSF 3 will require an engineering evaluation, see Schedules section for due dates.	
006	Solids: Sample point 006 is for solid manure sources that are directly land applied and not stored in a waste storage facility. This includes solid sources such as calf hutch manure, maternity pen bedpack, heifer bedpack, steer manure, etc. Representative samples shall be taken for each manure source type.	
008	West Feed Storage Area (FSA) & Runoff Control System: Sample point 008 is for visual monitoring and inspection of the west feed storage area (FSA) and associated runoff control system located east of the barns. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. The west feed storage area modifications were approved in 2011.	
009	WSF 4: Sample point 009 is for liquid waste storage facility 4 (WSF 4). WSF 4 is an earthen storage located south of WSF 3. The facility has an approximate capacity (MOL) of 5.02 million gallons and was constructed in 2015. This storage accepts manure and process wastewater from the feed storage areas and WSF 3. The Department received post constructed documentation for WSF 4 in 2020.	
012	Headland Stacking Manure: Sample point 010 is for solid manure stacked in approved headland stacking locations. Representative samples shall be taken of this manure prior to land application. Note: Headland stacking sites are subject to production site discharge limitations; weekly visual monitoring is required during use of stacking sites to ensure discharges meet permit requirements.	
013	East Feed Storage Area (FSA) & Runoff Control System: Sample point 013 is for visual monitoring and inspection of the east feed storage area (FSA) and associated runoff control system located at east of the	

Sample Point Designation For Animal Waste		
Sample Point Number	**Sample Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**	
	WSFs. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. Modifications to the feed leachate collection system were approved in 2019.	
014	Calf Hutch Area 1: Sample point 014 is for visual monitoring and inspection of the calf hutch area 1 and associated runoff control system located. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program. An engineering evaluation of the feedlot and runoff control system shall be submitted according to the Schedules section of the permit.	
015	Calf Hutch Area 2: Sample point 015 is for visual monitoring and inspection of the calf hutch area 2 and associated runoff control system. Proper operation and maintenance is required to ensure discharges meet permit requirements. Weekly inspections are required and shall be recorded according to monitoring program.	
016	Storm Water Runoff Control System: Sample point 016 is for visual monitoring and inspection of all production site storm water conveyance systems. This includes the storm water infiltration basin, roof gutter and downspout structures, drainage tile systems, grassed waterways and other diversion systems that transport uncontaminated storm water. Proper operation and maintenance is required to keep uncontaminated runoff diverted away from manure and process wastewater handling systems. Weekly inspections are required and shall be recorded according to monitoring program.	
017	Digester: Sample point 017 addresses all digested liquids located within the proposed digester tank. Manure will be piped from the proposed primary operations building to the digester and then returned to the existing and proposed manure processing buildings (for solids removal) after the digestion is completed. Liquids will then be transferred to WSF 1 for long term storage. Sampling from within the digester cell for nutrient content is only required if the liquids are to be manually pumped from the cell and directly land applied. Plans and specifications for the digester were approved by the department November 7, 2024 (R-2024-0196).	

1 Livestock Operations - Proposed Operation and Management

Production Area Discharge Limitations

Beginning on the effective date of the permit, the permittee may not discharge pollutants from the operation's production area (e.g., manure storage areas, outdoor animal lots, composting and leachate containment systems, milking center wastewater treatment/containment systems, raw material storage areas) to navigable waters, except in the event a 25-year, 24-hour rainfall event (or greater) causes the discharge from a structure which is properly designed and maintained to contain a 25-year, 24-hour rainfall event for this location as determined under s. NR 243.04. If an allowable discharge occurs from the production area, state water quality standards may not be exceeded.

Runoff Control

The permit requires control of contaminated runoff from all elements of the production area to prevent a discharge of pollutants to navigable waters in accordance with the Production Area Discharge Limitations and to comply with surface water quality standards and groundwater standards. Beginning on the effective date of this permit, (if needed) interim measures shall be implemented to prevent discharges of pollutants to navigable waters. In addition, permanent runoff control system(s) shall be designed, operated and maintained in accordance with the requirements found in USDA Natural

Resources Conservation Service standards and ch. NR 243, Wis. Adm. Code. If any upgrading or modifications to runoff controls are necessary, formal engineering plans and specifications must submitted to the Department for approval.

Manure and Process Wastewater Storage

The permit requires the operation to have adequate storage for manure and process wastewater and that storage or containment facilities are designed, operated and maintained to prevent overflows and discharges to waters of the state. In order to prevent overflows, the permittee must maintain levels of materials in liquid storage or containment facilities at or below certain levels including a one foot margin of safety that can never be exceeded. If any upgrading or modifications to the storage facilities are necessary, formal engineering plans and specifications must submitted to the Department for approval.

The permittee currently has approximately 313 days of storage for liquid manure. The permittee must maintain 180 days of storage, unless temporary reductions in required storage are approved by the Department.

Solid Manure Stacking

The operation has proposed to stack solid manure. All stacking of solid manure shall be done in accordance ch. NR 243, Wis. Adm. Code, which includes restrictions from NRCS Standard 313. Stacking of manure is considered to be part of the production area and is subject to the Production Area Discharge Limitations.

Ancillary Service and Storage Areas

The permittee shall take preventative maintenance actions and conduct visual inspections to minimize pollutant discharges from areas of the operation that are not part of the production area or land application areas. These areas are called ancillary service and storage areas and include access roads, shipping and receiving areas, maintenance areas, refuse piles and CAFO outdoor vegetated areas.

Nutrient Management

With 2,398 animal units (1596 milking/dry cows, 200 Heifers, and 220 calves) it is estimated that approximately 19,000,000 gallons of manure and process wastewater will be produced per year. The permittee owns *approximately* 710 acres of cropland and rents about 3,253 acres. Given the rotation commonly used by the permittee, 3,843 acres are available (or open) to receive manure and process wastewater on an annual basis. The permit requires all landspreading of manure and process wastewater be completed in accordance with an approved nutrient management plan. The permit will require sampling and analysis of manure and process wastewater that will be landspread. Landspreading rates must be adjusted based on sample analysis. The permit requires the permittee to maintain a daily log that documents landspreading activities. The permit also requires the submittal of an annual report that summarizes all landspreading activities. Plans must be updated annually to reflect cropping plans and other operational changes. Among the requirements, the plans must include detailed landspreading information including field by field nutrient budgets.

The permittee is required to implement a number or practices to address potential water quality impacts associated with the land application of manure and process wastewater. Among the permit conditions are restrictions on manure ponding, restrictions on runoff of manure and process wastewater from cropped fields, and setbacks from wells and direct conduits to groundwater (e.g., sinkholes, fractured bedrock at the surface). In addition, the permittee must implement a phosphorus based nutrient management plan that addresses phosphorus delivery to surface waters by basing manure and process wastewater applications on soil test phosphorus levels or the Wisconsin Phosphorus index. Additional phosphorus application restrictions apply to fields that are high in soil test phosphorus (>100 ppm).

The permittee must also implement conservation practices when applying manure near navigable waters and their conduits, referred to as the Surface Water Quality Management Area (SWQMA). These practices include a 100-foot setback from navigable waters and their conduits, a 35-foot vegetated buffer adjacent to the navigable water or conduit, or a practice that provides equivalent pollutant reductions equivalent to or better than the 100-foot setback.

In addition, the permittee must comply with restrictions on land application of manure and process wastewater on frozen or snow-covered ground. Included in these restrictions is a prohibition on surface applications of solid manure (≥12% solids) on frozen or snow-covered ground during February and March.

Monitoring and Sampling Requirements

The permittee must submit a monitoring and inspection program that outlines how the permittee will conduct self-inspections to determine compliance with permit conditions. These self-inspections include visual inspections of water lines, diversion devices, storage and containment structures and other parts of the production area. The permit requires periodic inspections and calibrations of landspreading equipment. The permittee must take corrective actions to problems identified inspections or otherwise notify the Department. Samples of manure, process wastewater and soils receiving land applied materials from the operation must also be collected and analyzed.

Sampling Points

The permit identifies the different sources of land applied materials (e.g., manure storage facilities, milking centers, egg-washing facilities) as "Sampling Points." For these Sampling Points, the permittee is required to sample and analyze the different sources for nutrients and other parameters which serve as the basis for determining rates of application for these materials. Other areas are also identified as Sampling Points as a means of identifying them as areas requiring action by the permittee, such as an upgrade or evaluation of a certain system or structure (e.g., runoff control systems), even though sampling is not actually required.

1.1 Sample Point Number: 001- WSF 1; 003- WSF 2; 005- WSF 3; 009- WSF 4, and 017- Digester

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Total		lb/1000gal	2/Month	Grab	
Nitrogen, Available		lb/1000gal	2/Month	Calculated	
Phosphorus, Total		lb/1000gal	2/Month	Grab	
Phosphorus, Available		lb/1000gal	2/Month	Calculated	
Solids, Total		Percent	2/Month	Grab	

1.1.1 Changes from Previous Permit

Sample point 017 was added for the proposed construction of a digester waste treatment system.

1.1.2 Explanation of Operation and Management Requirements

Manure must be properly stored and land applied according to the permit and nutrient management plan.

1.2 Sample Point Number: 002- Settled Solids; 006- Solids; 012- Headland Stacking Manure

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Nitrogen, Total		lbs/ton	Quarterly	Grab	
Nitrogen, Available		lbs/ton	Quarterly	Calculated	
Phosphorus, Total		lbs/ton	Quarterly	Grab	
Phosphorus, Available		lbs/ton	Quarterly	Calculated	
Solids, Total		Percent	Quarterly	Grab	

1.2.1 Changes from Previous Permit

No changes.

1.2.2 Explanation of Operation and Management Requirements

Solid manure sources must be properly sampled and land applied according to the permit and nutrient management plan.

1.3 Sample Point Number: 008- West FSA & Runoff Controls; 013- East FSA & Runoff Controls; 014- Calf Hutch Area 1; 015- Calf Hutch Area 2, and 016- Storm Water Runoff Controls

1.3.1 Changes from Previous Permit

Sample point 016 was updated to include a stormwater infiltration basin for the construction of the proposed digester system.

1.3.2 Explanation of Operation and Management Requirements

Proper operation and maintenance is required to ensure unlawful discharges to waters of the state do not occur. Weekly or quarterly inspections are required and shall be recorded to the monitoring plan.

2 Schedules

2.1 Emergency Response Plan

Required Action	Due Date
Develop Emergency Response Plan: Develop a written Emergency Response Plan within 30 days of permit coverage, available to the Department upon request.	11/01/2021

2.2 Monitoring & Inspection Program

Use of the department's monitoring and inspection program template is encouraged, but optional.

Required Action	Due Date
Proposed Monitoring and Inspection Program: Consistent with the Monitoring and Sampling Requirements subsection, the permittee shall submit a proposed monitoring and inspection program within 60 days of the effective date of this permit.	12/01/2021

2.3 Annual Reports

Submit annual reports by January 31 of each year in accordance with the annual reports subsection in standard requirements.

Required Action	Due Date
Submit Annual Report #1: Shall include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2022
Submit Annual Report #2: Shall include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2023
Submit Annual Report #3: Shall include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2024
Submit Annual Report #4: Shall include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2025
Submit Annual Report #5: Shall include monitoring and inspection results from the previous 12 months, consistent with the requirements of department form 3400-025E.	01/31/2026
Ongoing Annual Reports: Continue to submit Annual Reports until permit reissuance has been completed.	

2.4 Nutrient Management Plan

Submit annual nutrient management plan (NMP) updates by March 31 of each year. Note, in addition to annual NMP updates, submit NMP amendments and substantial revisions to the department for written approval prior to implementation of any changes to the NMP.

Required Action	Due Date
Management Plan Submittal: Submit any necessary updates to the Nutrient Management Plan to meet the conditions outlined in this permit (see conditions in the Livestock Operational and Sampling Requirements section).	03/31/2022
Management Plan Annual Update #1: Submit an Annual Update to the Nutrient Management Plan by March 31st of each year. Note: In addition to Annual Updates, submit Management Plan Amendments to the Department for written approval prior to implementation of any changes to nutrient management practices, in accordance with the Nutrient Management requirements in the Livestock Operational and Sampling Requirements section.	03/31/2022
Management Plan Annual Update #2: Submit an Annual Update to the Nutrient Management Plan.	03/31/2023

Management Plan Annual Update #3: Submit an Annual Update to the Nutrient Management Plan.	03/31/2024
Management Plan Annual Update #4: Submit an Annual Update to the Nutrient Management Plan.	03/31/2025
Management Plan Annual Update #5: Submit an Annual Update to the Nutrient Management Plan.	03/31/2026
Ongoing Management Plan Annual Updates: Continue to submit Annual Updates to the Nutrient Management Plan until permit reissuance has been completed.	

2.5 Waste Storage Facility - Engineering Evaluation

Required Action	Due Date
Retain Qualified Engineering Expert: Retain a qualified engineering expert to complete an engineering evaluation for WSF 1, WSF 2, and WSF 3 and report the name of the expert to the Department.	03/01/2022
Complete Engineering Evaluation of Existing System: Submit a written report evaluating the existing waste storage facility's ability to meet the conditions in the Production Area Discharge Limitations and Manure and Process Wastewater Storage subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	06/01/2023
Plans and Specifications: Submit plans and specifications for Department review and approval in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code, to permanently correct any adverse manure storage conditions.	10/01/2023
Corrections and Post Construction Documentation: Complete construction on the manure storage facility that permanently corrects any adverse conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of completion of the project.	10/01/2024

2.6 Runoff Control System - Engineering Evaluation

Required Action	Due Date
Retain a Qualified Engineer Expert: Retain a qualified expert to complete an engineering evaluation for the Calf Hutch Area 1 runoff control system and report the name of the expert to the Department.	03/01/2022
Written Description of Existing System: Submit a written description of the existing runoff control system and its adequacy to permanently meet the conditions in the Production Area Discharge Limitations and Runoff Control subsections and s. NR 243.15, Wis. Adm. Code. (See Standard Requirements for report details.)	11/01/2022
Plans and Specifications: Submit plans and specifications for Department review and approval to permanently correct any adverse runoff control conditions in accordance with Chapter 281.41, Wis. Stats., and Chapter NR 243, Wis. Adm. Code.	02/01/2023
Corrections and Post Construction Documentation: Complete construction of runoff controls that permanently correct any adverse runoff control conditions in concurrence with and approval by the Department, by the specified Date Due. Submit post construction documentation within 60 days of	02/01/2024

completion of the project.	

2.7 Submit Permit Reissuance Application

Required Action	Due Date
Reissuance Application: Submit a complete permit reissuance application 180 days prior to permit expiration.	03/31/2026

2.8 Explanation of Schedules

Emergency Response Plan, Monitoring and Inspection Program- Schedules consistent with permit requirements.
Annual Reports, Nutrient Management Plan, Submit Permit Reissuance Application- Schedules Consistent with Permit Requirements.
Other schedule items are required to comply with s. NR 243 WPDES permit conditions.

Attachments

Farm sample point map

Digester Plan Approval Letter

5-year NMP Conditional Approval Letter

Evaluation Review for Days of Storage Approval Letter

Public Notice

Justification Of Any Waivers From Permit Application Requirements

Reason for permit modification does not require a new 5-year NMP submittal or Days of Storage calculation.

Prepared By: Jean Weaver Agricultural Runoff Management Specialist Date: 3/13/2025

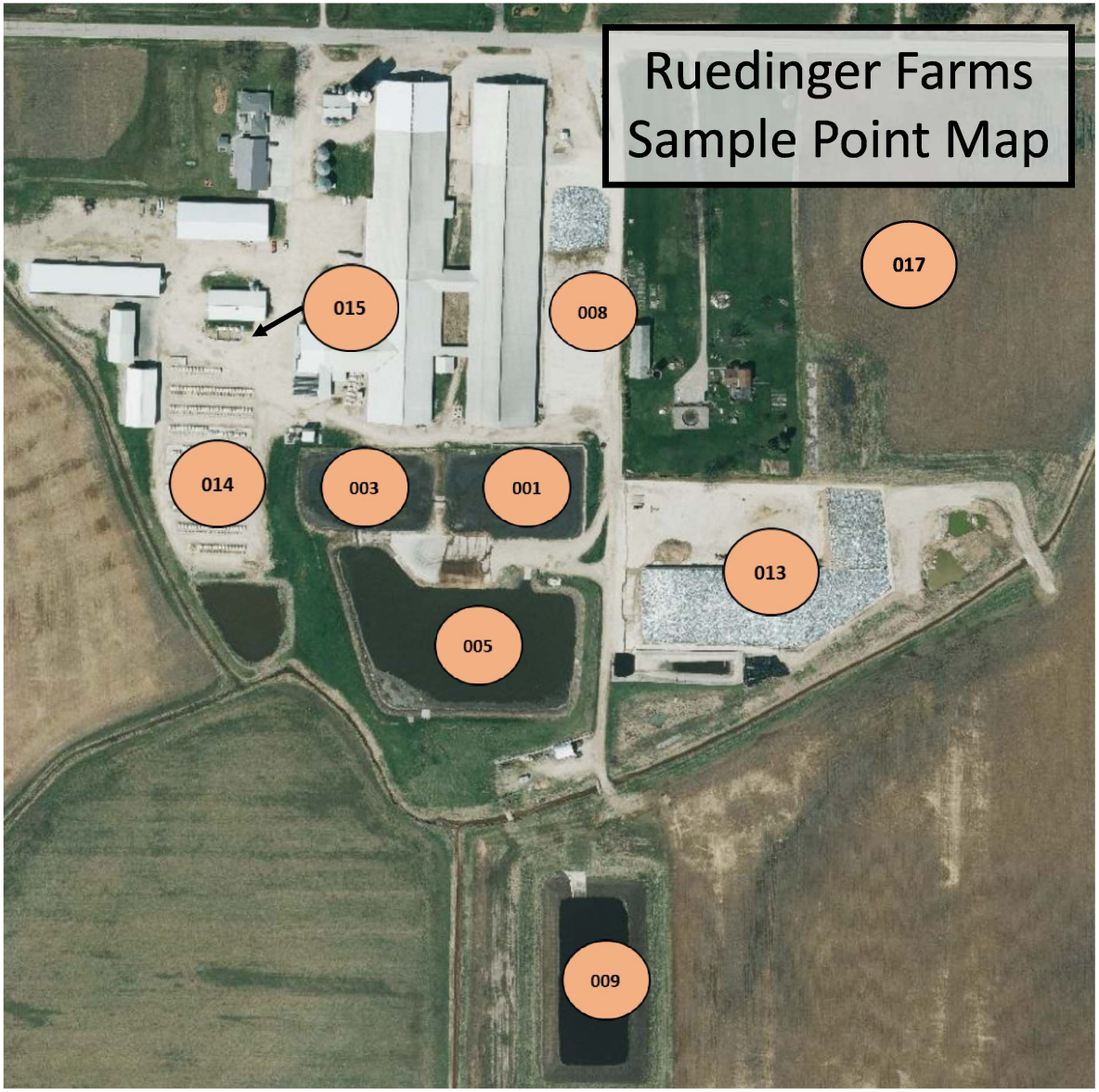
Ruedinger Farms Inc

PERMIT TERM:

EFFECTIVE DATE - October 01, 2021

EXPIRATION DATE - September 30,2026

MODIFICATION DATE – May 1, 2025

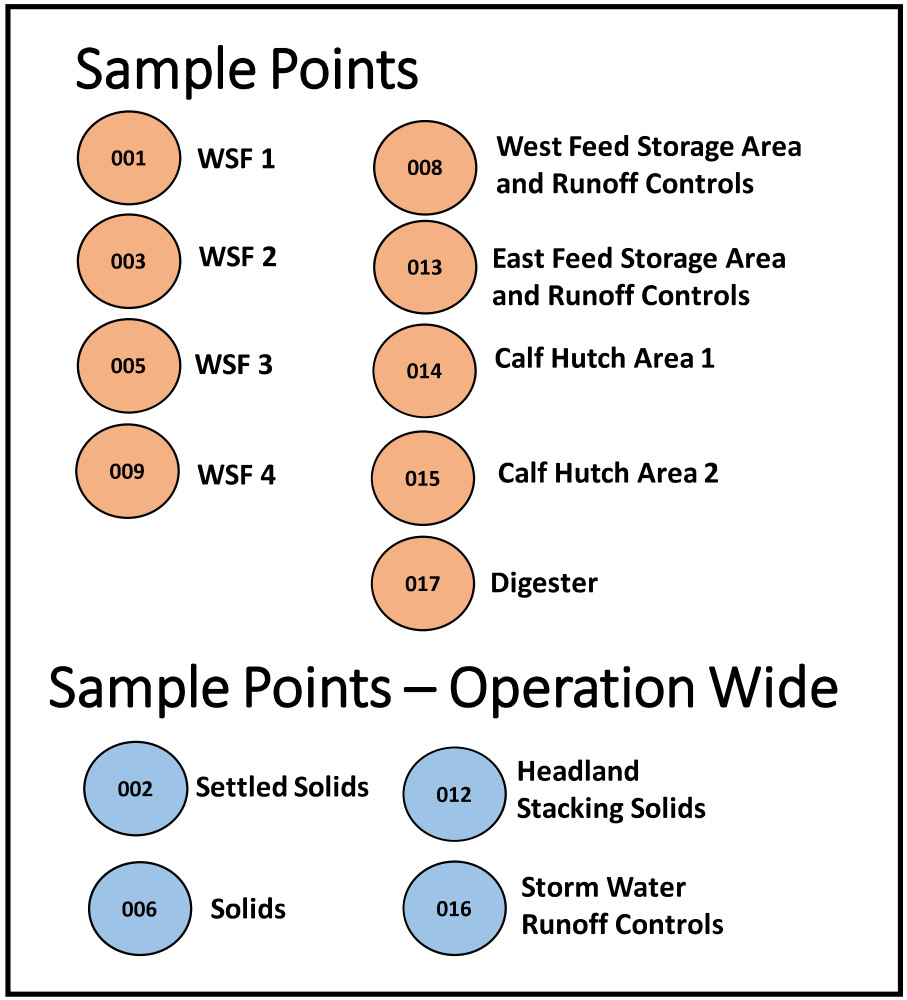


Sample Points

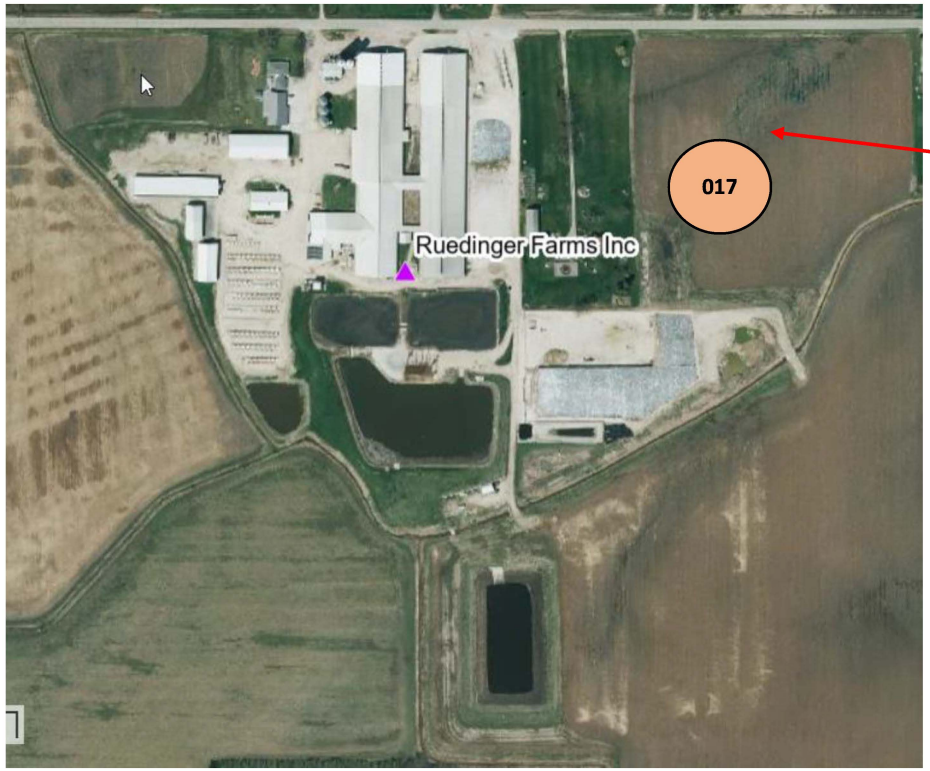
- 001 WSF 1
- 003 WSF 2
- 005 WSF 3
- 009 WSF 4
- 008 West Feed Storage Area and Runoff Controls
- 013 East Feed Storage Area and Runoff Controls
- 014 Calf Hutch Area 1
- 015 Calf Hutch Area 2
- 017 Digester

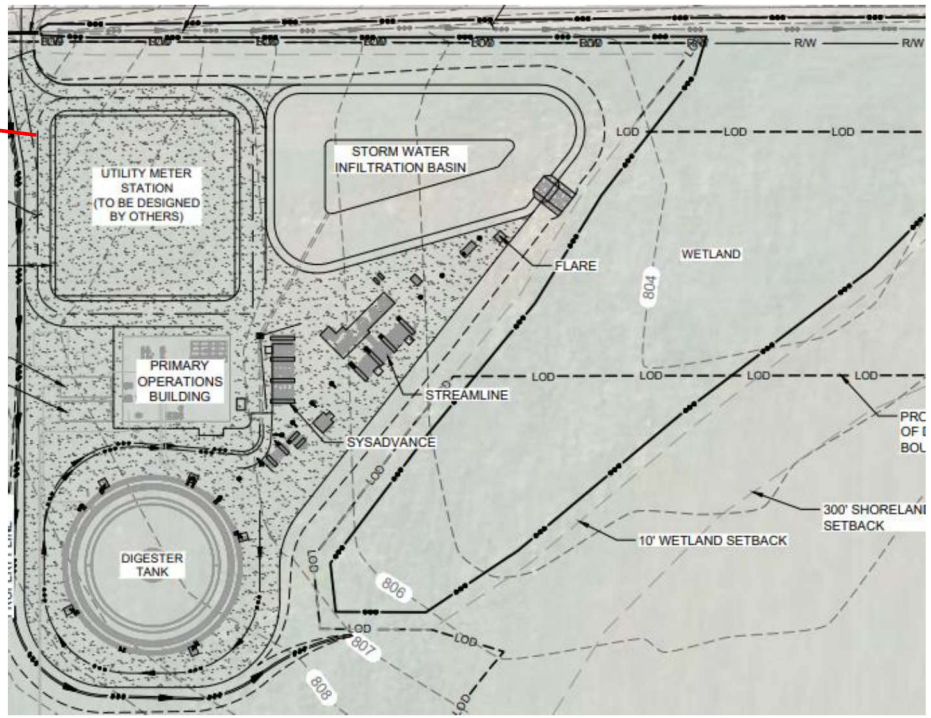
Sample Points – Operation Wide

- 002 Settled Solids
- 006 Solids
- 012 Headland Stacking Solids
- 016 Storm Water Runoff Controls


Sample Points
001
WSF 1
003
WSF 2
005
WSF 3
009
WSF 4
008
West Feed Storage Area and Runoff Controls
013
East Feed Storage Area and Runoff Controls
014
Calf Hutch Area 1
015
Calf Hutch Area 2
017
Digester
Sample Points – Operation Wide
002
Settled Solids
006
Solids
012
Headland Stacking Solids
016
Storm Water Runoff Controls

Proposed Digester/Permit Modification





Timeline: Permit modification submitted, digester construction planned for 2025, gas production expected in first quarter of 2026


Utility Station
Storm water Basin
Operations Building
Digester Tank
017
Ruedinger Farms Inc

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Tony Evers, Governor

Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

WISCONSIN DEPT. OF NATURAL RESOURCES

November 7, 2024

FILE REF: R-2024-0196
WPDES Permit #: WI-0064386

John Ruedinger
Ruedinger Farms Inc
W7222 Cemetary Rd
Van Dyne, WI 54979

Subject: Conditional Approval of Plans & Specifications for digester tanks and associated waste transfer components at Ruedinger Farms Inc at NE¼ NW¼ of T16N, R17E, Section 18 in Friendship Township, Fond Du Lac County

Dear Mr. Ruedinger:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has reviewed and conditionally approves the above referenced plans and specifications, submitted under certification by Charles D Slavin, Burns & McDonnell Engineering Inc and received on August 9, 2024 with revisions received on October 31, 2024 and November 6, 2024. The review was conducted in accordance with s. 281.41, Wis. Stats., chs. NR 151 and NR 243, Wis. Adm. Code, and applicable NRCS Standards. The attached engineering report describes the project, lists standards that apply and provides compliance analysis. Questions may be directed to the assigned regional staff or the review engineer Tony Salituro (contact information is at the end of this letter).

Proposed Project: The proposed project includes the following facilities that are reviewable under s. NR 243.15, Wis. Adm. Code: A concrete digester structure and associated waste transfer pipelines.

Conditions of Approval: The plans and specifications for project number R-2024-0066 are hereby approved and subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below:

1. Additional Soil Investigation: Additional soil investigations will be completed at the location of the reception structures during construction. Should saturation be found above the bottom of the structure, anti-float measures, including concrete slabs or other standard industry practices, shall be implemented. All soil investigations shall be provided in the post construction documentation.
2. Revisions: If revisions are made to the approved plans and specifications, revised plans and specifications shall be submitted for approval modification, in accordance with ss. NR 108.03 and NR 108.04, Wis. Adm. Code, and s. 281.41(1)(c), Wis. Stats. Submit revised plans and specifications via the Department's e-Permitting System. Note: This includes revisions for local permitting. If a formal approval modification may not be warranted, contact the review engineer to confirm.
3. Approval Period: In accordance with ss. NR 243.15(1)(a)1., and NR 108.04(2)d., Wis. Adm. Code, if construction is not commenced within 2 years from the approval date, the approval is void, and a new approval must be obtained prior to commencing construction.
4. Notification: Prior to construction and when construction is complete, notify the Department's regional contact and county contact provided a copy of the approval (contact information is at the end of this letter).
5. Inspection: During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees).
6. Post-Construction Documentation: In accordance with the permit, a post-construction report must be submitted to the DNR's e-Permitting website (http://dnr.wi.gov/permits/water) within 60 days of completing construction. The report must include documentation specified by s. NR 243.15(10), Wis. Adm. Code.

Limitation of Approval: The Department reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services or other state or local agencies to ensure conformance with applicable codes or regulations of such agencies.

Tax Treatment: Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain the forms, and information about this sales tax exemption, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website http://www.revenue.wi.gov/.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Bernie Michaud

Bernie Michaud, P.E.
CAFO Engineer Supervisor
Watershed Management Program

Enclosures: Wisconsin DNR Engineering Report

email: John Ruedinger; Ruedinger Farms Inc
(920) 602-0695; john@ruedingerfarms.com

Charles D. Slavin; Burns & McDonnell Engineering, Inc.
(816) 822-3585; cslavin@burnsmcd.com

Matt Woodrow; DATCP
(920) 427-8505; matthew.woodrow@wisconsin.gov

Brad Murry; Fond du Lac County Land & Water
(920) 929-4679; bradly.murry@fdlco.wi.gov

Jean Weaver; DNR-Southeast Region
jeanm.weaver@wisconsin.gov

Michelle M Scott; DNR-Southeast Region
(920) 252-0679; Michelle.Scott@wisconsin.gov

Anthony Salituro; DNR-Central Office
(608) 444-2869; anthony.salituro@wisconsin.gov

WISCONSIN DEPARTMENT OF NATURAL RESOURCES ENGINEERING REPORT

GENERAL INFORMATION

Farm Name: Ruedinger Farms Inc **WPDES Permit#:** WI-0064386

Location Address: W7222 Cemetery Rd, Van Dyne **DNR Project #:** R-2024-0196

Engineering Plans Certified by:	Initial Submittal:	Revised Submittal(s):
Charles D Slavin, P.E. JB Randolph	August 9, 2024	October 31, 2024 and November 6, 2024

Site Assessment: Geographical features of the site include soils that are silt loams and silty clay loams. The nearest stream is an unnamed tributary of Lake Winnebago approximately 500 ft to the southeast of the proposed project area. A wetland delineation was completed by assured wetland delineator Chad M Fradette and found a wetland (1.4 ac) within the general area of the project site. All wetland areas will be avoided as part of the construction. Clean runoff will be diverted around waste handling areas to existing waterways. No karst features are known to exist within 1,000 ft of the proposed facilities or systems. No ground water supply wells are located within 250 feet of the proposed facilities or systems.

Soil investigations were performed in October 2024 by CGC Inc consisting of six soil borings in the proposed project area, which found the primary subsoils consist of stiff lean clay followed by silty/clayey sands. Potential bedrock was found in 4 of the 6 soil borings, with one in the vicinity of the digester to a depth of 21 ft (~786 ft). This is well below the proposed bottom elevation of the digester facility.

Water was visually observed in 4 of the 6 soil borings, but no Munsell colors were recorded for the borings in accordance with NRCS 313 and 634. No saturation was observed in the proximity of the proposed digester facility and the digester vessel is proposed to be installed at approximately 2 ft above grade. Of the two soil borings nearest to the reception structures, one visually observed saturation at an elevation of 798.5 ft, below the bottom elevation of the reception structures. The saturation is believed to be perched due to no saturation being found below the observed water, and it not being present in all soil borings. Additional test pits are proposed to be dug to verify saturated soil conditions for the reception structures and is recommended to be a condition of approval.

Proposed Facilities:

Manure Digester: The proposed design was submitted to meet NRCS 313 (10/17R), and 522 (10/17R), and ACI-350. The design is compliant with s. NR 243.15(3), Wis. Adm. Code. The digester facility will be located Below is a summary of what is proposed.

- The proposed digester tank will be 100 ft in diameter and 27 ft tall. The tank base consists of the floor slab, foundations and footings and will be constructed of cast-in-place reinforced concrete. The floor slab will be 6-inches thick. The tank walls will be made of precast reinforced concrete panels 10-inches thick and approximately 7 ft wide . The wall panels will fit into a keyway formed around the perimeter of the base. The panels will be bound together with steel cable “tendons” which run through conduits inside the panels and are tensioned. The keyway and voids between the panels will be filled with combinations of concrete, grout, and sealants to provide a liquid tight vessel.
- The proposed digester will have a total and maximum operating level (MOL) volume of 1.57 MG and 1.46 MG gallons respectively. The digester is designed to be operated with 2 ft of freeboard. The digester tank does not provide active liquid manure storage. The floor elevation will be 809.0 ft and the MOL elevation will be 834.0 ft. The tank will be covered.
- The tank structural design calls for the sub-base to provide a 2,500 psf bearing capacity. The sub-base is to be prepared as recommended in the Geotech report prepared by CGC, Inc dated October 18, 2024. The tank will be hydrostatically tested for liquid losses as specified in the construction quality assurance plan prior to use.
- The digesters are operated with a SCADA system which monitors such things as liquid flows and levels. The digester is also equipped with a flammable gas detection system and flare to release gas if necessary.

Primary Operations Building: The proposed design was submitted to meet with NRCS Standards NRCS 313 and 522 (10/17R). The design is compliance with s. NR 243.15(4), Wis. Adm. Code. The Primary Operations building will be North of the digester tank. Information Below is a summary of what is proposed.

- The Primary Operations Building will be 50-ft long by 65-ft wide. The floor slab will be 8-inch thick reinforced concrete and will have floor drains to collect potential spills.

Waste Transfer System: The proposed design was submitted to meet with NRCS Standard 634 (11/22). The design is compliant with s. NR 243.15(4), Wis. Adm. Code.

- There will be two, Wieser W18000 18,000 gal. pre-cast concrete reception tanks located west of the Primary Operations Building. One tank will be for raw manure and the other for digestate. The tanks will be 30-ft long by 12-ft wide by 9.3 ft deep. The walls will be 6-inches thick and the floor 3.5-inches thick (9-inch rib depth). The floor elevations will be 800 ft. This tank is NRCS pre-approved and is expected to withstand hydrostatic loads in saturated conditions. If the saturated conditions are greater than 6.36 ft above the bottom of the tanks, anti-flotation base extensions should be provided to prevent flotation.
- A single 7 ft diameter x 12 ft deep HDPE condensate tank will be in the Primary Operations Building. The bottom elevation will be at 801.5 ft. The condensate tank is currently located outside saturation conditions based on visual observation. Should saturation be observed at a higher elevation during construction, specific anti-flotation measures should be taken to withstand the buoyant forces.
- The Ruedinger Farms manure digester system has many liquid waste transfer pipelines (including liquid manure and digestate) in the digester project area. This system is complicated, and pipelines can be either above or below ground. The plans include pipe profile drawings for eight of the main below ground pipes with details for bedding and thrust control. Pipe material is specified as either Sch. 80 PVC, SDR-11 HDPE, or stainless steel pipe. Design pumping pressures range from 10 to 60 psi. Most design flow velocities range from 1.5 to 4.5 fps. Plans include details for above ground pipe hangers. Cleanout access will be provided for underground waste transfer pipelines.

DAYS OF AVAILABLE LIQUID WASTE STORAGE: The digester facility will not increase waste generation or storage on site and will have no effect on Ruedinger Farms Inc's available manure storage.

PURPOSE OF THIS REPORT: This report documents review of plans and specifications for each structure or practice indicated below, including findings regarding the structure or practice's compliance with applicable standards. The reviewer considered if management and site assessment were conducted, documented, and reflected in the final design, and if proper construction and related plans (operation and maintenance, inspection, erosion control if applicable) were provided, and demonstrated compliance with applicable rules standards.

DECISION RECOMMENDATION: Based on my review completed on November 7, 2024, the proposed plans and specifications meet ch. NR 243, Wis. Adm. Code, and applicable NRCS Standards. Therefore, I recommend the plans and specifications be approved with specific conditions (justification provided). The following condition is recommended to be added to the approval letter:

- A Condition of Approval includes a requirement to dig additional soil borings to confirm subsurface saturation conditions near the reception structures. During installation of the condensate tank, should saturation be present above the bottom of the structure, anti-float measures, including concrete slabs or other standard industry practices, shall be implemented.

Anthony Salituro

Tony Salituro, EIT
Water Resources Engineer

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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WISCONSIN DEPT. OF NATURAL RESOURCES

July 2, 2024

FILE REF: R-2024-0096
WPDES Permit #: WI-0064386

John Ruedinger
Ruedinger Farms Inc
W7222 Cemetery Rd
Van Dyne, WI 54979

Subject: Conditional Approval of Plans & Specifications for a Waste Transfer Systems and Solid Stacking Area and an Alternative Well Setback Approval at, Ruedinger Farms Inc at NW¼ of T16N, R17E, Section 18 in Friendship Township, Fond Du Lac County

Dear Mr. Ruedinger:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has reviewed and conditionally approves the above referenced plans and specifications, submitted under certification by James Roach, Roach and Associates and received on April 16, 2024. The review was conducted in accordance with s. 281.41, Wis. Stats., chs. NR 151 and NR 243, Wis. Adm. Code, and applicable NRCS Standards. The attached engineering report describes the project, lists standards that apply and provides compliance analysis. Questions may be directed to the assigned regional staff or the review engineer Tony Salituro (contact information is at the end of this letter).

Proposed Project: The proposed project includes the following facilities that are reviewable under s. NR 243.15, Wis. Adm. Code: Modifying the existing waste transfer system to transfer manure back and forth from the proposed anerobic digester facility, including various waste transfer pipelines and flush channels, and a new solid stacking facility.

Conditions of Approval: The plans and specifications for project number R-2024-0096 are hereby approved and subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below:

1. Additional Test Pits: Approximately 25 ft f the P8 pipeline and the 31 ft of the F3 flume are not covered by a test pit. Additional test pits during installation of the pipelines are proposed and will be provided in the post construction documentation.
2. Revisions: If revisions are made to the approved plans and specifications, revised plans and specifications shall be submitted for approval modification, in accordance with ss. NR 108.03 and NR 108.04, Wis. Adm. Code, and s. 281.41(1)(c), Wis. Stats. Submit revised plans and specifications via the Department's e-Permitting System. Note: This includes revisions for local permitting. If a formal approval modification may not be warranted, contact the review engineer to confirm.
3. Approval Period: In accordance with ss. NR 243.15(1)(a)1., and NR 108.04(2)d., Wis. Adm. Code, if construction is not commenced within 2 years from the approval date, the approval is void, and a new approval must be obtained prior to commencing construction.
4. Notification: Prior to construction and when construction is complete, notify the Department's regional contact and county contact provided a copy of the approval (contact information is at the end of this letter).
5. Inspection: During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees).
6. Post-Construction Documentation: In accordance with the permit, a post-construction report must be submitted to the DNR's e-Permitting website (http://dnr.wi.gov/permits/water) within 60 days of completing construction. The report must include documentation specified by s. NR 243.15(10), Wis. Adm. Code.

Limitation of Approval: The Department reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services or other state or local agencies to ensure conformance with applicable codes or regulations of such agencies.

Tax Treatment: Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain the forms, and information about this sales tax exemption, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website http://www.revenue.wi.gov/.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

Bernie Michaud

Bernie Michaud, P.E.
CAFO Engineer Supervisor
Watershed Management Program

Enclosures: Wisconsin DNR Engineering Report

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WISCONSIN DEPARTMENT OF NATURAL RESOURCES ENGINEERING REPORT

GENERAL INFORMATION

Farm Name: Ruedinger Farms Inc **WPDES Permit#:** WI-0064386

Location Address: W7222 Cemetery Road, Van Dyne WI **DNR Project #:** R-2024-0096

Engineering Plans Certified by:	Initial Submittal:	Revised Submittal(s):
James Roach, PE Pat Roach, PE	April 16, 2024	NA

Site Assessment: Geographical features of the site include soils that are silt loams. The nearest stream is an unnamed tributary of Lake Winnebago approximately 500 ft to the south of the production area. A wetland delineation was completed by assured wetland delineator Courtney Roach and found no wetlands will be impacted by the proposed project. No karst features are known to exist within 1,000 ft of the proposed facilities or systems. Three ground water supply wells (KW308, YM431, YM423) are located within 250 feet of the proposed facilities or systems. An alternative well setback is requested.

Soil investigations were performed in 2003, 2005, 2007, 2008, 2011, and 2022 by Fond Du Lac County and Roach and Associates consisting of nine test pits in the proposed project area, which found the primary subsoils consist of red clays (CL) with a fines content in the range of 59.5 - 78.8% and plasticity index of 16 - 29. Additionally, nearby reception tanks and waste storage facilities were used to verify separation from bedrock for transfer pipelines. Neither groundwater nor bedrock were found in any test pits. A gravity flume pipeline and one pressure pipeline have no test pit for approximately 31 ft of the length of pipeline. Test pits will be provided during construction as a condition of approval.

PROJECT SUMMARY

Proposed Facilities:

Waste Transfer System: The proposed design was submitted to meet with NRCS Standard 634 (11/22). The design is compliant with s. NR 243.15(4), Wis. Adm. Code.

South Flume WTS

- **Flume 1 (F1)**: A 2' – 2.5" wide by 3' – 6" tall gravity transfer channel (290 LF) will be the transfer system for waste bedding scraped from freestall barns 1 and 2. The channel will be at the south edge of the barns where the existing WSFs 1 and 2 will be abandoned (approved on August 8, 2023). The channel will be a preapproved Precast Wieser Concrete Manure Channel approved by NRCS on June 10, 2023. The channel will have fill along the sides that meet a P200 $\geq$ 20% and a PI $\geq$ 7. The existing in place soils beneath the channel will meet the required conditions in the preapproval.
- **Gravity Pipe 2 (G2)**: The 24-inch diameter HDPE gravity pipeline (58 LF) will transfer waste from the F1 to the T7 tank for usage with the proposed digester. The pipe penetration into the tank will be made liquid tight using a link seal pipe penetration connection.

Center WTS

- **Pressure Pipe 6 (P6)**: A 4-inch diameter PVC pressure pipeline (225 LF) will transfer waste between the existing T2 tank to the existing T1 tank. A 7.5HP Houle 4" pump will provide an operating pressure and velocity of 10.4 psi and 9.5 ft/sec respectively. The pipeline will have a liquid tight link seal pipe penetration through both tanks.
- **Pressure Pipe 10 (P10)**: A 4-inch diameter PVC pressure pipeline (112 LF) will transfer waste from the existing T2 tank to the midsection of the proposed F1 flume. A 5HP Houle 4" pump will provide an operating pressure and velocity of 7.2 psi and 8.6 ft/sec respectively. The pipeline will have a liquid tight link seal pipe penetration through the tank and flume.

North Flume WTS

- **Flume 2 and 3 (F2 and F3)**: Both flumes will be 3 ft wide gravity flume systems that will capture manure and waste from the existing freestall barns 1 and 2. The flumes will be in the floor of the center of the barns. The flumes are preapproved Wieser Trench Boxes approved by NRCS on January 8, 2024. The system will consist of four trench boxes connected by lengths of 24-inch diameter

HDPE gravity pipelines. The top of the flumes will be open to capture the manure scraped from the floor.

- **Pressure Pipe 7 (P7)**: A 6-inch diameter PVC pressure pipeline (123 LF) will be a flush pipeline to transfer waste from the T1 for the F2 flume. A 25HP Houle 4" pump will provide an operating pressure and velocity of 7.8 psi and 10.0 ft/sec respectively. The pipeline is a severe service pipeline and will be pressure tested. The pipeline will have a liquid tight link seal pipe penetration through the tank and flume.
- **Pressure Pipe 8 (P8)**: A 6-inch diameter PVC pressure pipeline (154 LF) will be a flush pipeline to transfer waste from the T1 for the F3 flume. A 25HP Houle 4" pump will provide an operating pressure and velocity of 8.2 psi and 9.9 ft/sec respectively. The pipeline is a severe service pipeline and will be pressure tested. The pipeline will have a liquid tight link seal pipe penetration through the tank and flume.
- **Pressure Pipe 9**: A 6-inch diameter PVC pressure pipeline (373 LF) will transfer excess manure from the T1 tank to the midsection of the proposed F1 flume. A 10HP Houle 4" pump will provide an operating pressure and velocity of 7.5 psi and 5.2 ft/sec respectively. The pipeline will have a liquid tight link seal pipe penetration through the tank and flume.

Stacking Building WTS

- **T6, T7, and T8 Tanks**: The three tanks are preapproved Excel Engineering JP precast concrete tanks that will be used in the waste management system of the farm. Each tank will be 20 ft in diameter and 12 ft deep with a total volume of 28,199 gallons.
    - T6 will be used to stored flush water to flush the F1 flume.
    - T7 will be used to store high solid manure for distribution to the anerobic digester.
    - T8 will be used to store digestate return from the anerobic digester process.
- **Pressure Pipe 11 (P11)**: An 8-inch diameter PVC pressure pipeline (358 LF) that will be a flush pipeline to transfer waste from the T6 tank to the F1 flume. A 30HP Houle 4" pump will provide an operating pressure and velocity of 9.5 psi and 6.0 ft/sec respectively. The pipeline is a severe service pipeline and will be pressure tested. The pipeline will have a liquid tight link seal pipe penetration through the tank and flume.
- **Pressure Pipe 12 (P12)**: An 8-inch diameter PVC pressure pipeline (300 LF) will transfer waste from the T8 tank to the existing WSF1. A 30HP Houle 4" pump will provide an operating pressure and velocity of 10.9 psi and 5.8 ft/sec respectively. The pipeline will have a liquid tight link seal pipe penetration through the tank. The pipeline will extend above the top of the WSF1 liner and will have no pipe penetration.
- **Pressure Pipe 13 (P13)**: An 8-inch diameter PVC pressure pipeline (756 LF) will transfer waste from the T8 tank to the existing WSF2. A 30HP Houle 4" pump will provide an operating pressure and velocity of 13.7 psi and 5.4 ft/sec respectively. The pipeline will have a liquid tight link seal pipe penetration through the tank. The pipeline will extend above the top of the WSF2 liner and will have no pipe penetration.

All pipelines that exceed a velocity of 5 ft/sec have no valves to protect from water hammer so a velocity that exceeds 5 ft/sec is allowed. All pipe bends shall have thrust control blocks installed.

Manure Stacking Building: The proposed design was submitted to meet with NRCS Standards 522, Table 1, Column 1 (06/21). The design is compliant with NR s. 243.15(4), Wis. Adm. Code. The stacking building will be east of the existing barns. Below is a summary of what is proposed.

- The reinforce concrete floor will be approximately 67 ft x 135 ft with a 7-inches thick steel reinforced concrete. Waterstop will be placed at the concrete joints spaced every 100 ft of length of the concrete floor. The floor will be placed on a soil sub liner composing 2 ft of soils meeting a P200 $\geq$ 20%.
- The building will have exterior walls with expansive waterstop placed at the floor to wall connection. Expansive waterstop will also be placed at the floor connection to the existing barn. The building floor will be sloped towards the JP tanks to capture any potential spillage from the separation process in the building.

Manure Stacking Pad: The proposed design was submitted to meet with NRCS Standard 313, Table 5, Column 3 (10/17) and NRCS 522, Table 1, Column 3. The design is compliant with s. NR 243.15(3), Wis. Adm. Code. The stacking pad will be located south of the existing WSF1 to store bed pack until it can be spread. Below is a summary of what is proposed.

- The proposed manure stacking pad will be 60 ft x 140 ft with a 7 inch thick steel reinforced concrete floor. In-place soils will meet the liner criteria of 3 ft of soils with a P200 ≥ 40%. Sand and gravel will be located between the soil and concrete component.
- The stacking pad is sloped north to allow any runoff from the stacking area to directly drain into WSF1. The east, south, and west edges of the stacking area will have a 6-inch curb installed to prevent runoff from leaving the area.

Abandonment: The abandonment plans were submitted for various waste transfer pipelines and auger channels that will be replaced as part of the proposed project. The plan is compliant with s. NR 243.17(7), Wis. Adm. Code.

- The auger channels will have all manure removed and applied onto cropland according to the approved 590 Nutrient Management Plan. The channels will then be filled with clear stone and capped with 5-inches of concrete. Any penetration that the auger channels had in the tanks will be repaired and made watertight. Pressure pipelines that penetrate the tanks and WSF will be broken and capped to prevent transfer of materials.

Alternative Well Setback Request: The submitted plans include a request for an alternative well setback. The proposed waste transfer pipelines meet the ch. NR 812, Wis. Adm. Code 50 ft setback from the well. The attached memo from DNR Hydrogeologist Ian Anderson recommends that these alternative practice or design well setbacks be approved as an alternative design or practice per s. NR 243.15(1)(c), Wis. Adm. Code.

DAYS OF AVAILABLE LIQUID WASTE STORAGE: The submitted information states that Ruedinger Farms Inc will have 380 days of liquid waste storage based on the volumes listed in the table below with respect to s. NR 243.15(3)(i) to (k), Wis. Adm. Code. The proposed number of animal units provided for the calculation is 3,080 once expansion of the farm is completed. The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values and based upon a collection period of 365 days. The leachate and first 0.25" flush runoff from the feed storage area is captured in permanent storage, with the remainder transferred to a VTA on site.

Waste Storage	Total Vol. from Settled Top to Bottom	Solids Storage	25-yr, 24-hr Precip. on Storage	25-yr, 24-hr Collected Runoff	Freeboard Vol.	Max. Operating Level (MOL) Vol.
#1	9,491,298	0	254,915	20,797	655,418	8,560,168
#2	22,141,123	0	550,233	0	1,409,831	20,181,059
					Total MOL Vol:	28,741,227
					Days of Storage:	**380**

Liquids Collected/Stored	**Annual Gallons**
Manure and Bedding	15,551,765
Parlor Wastewater	5,518,550
Feed Storage Leachate	203,508
Feed Storage Runoff Collected (0.25" Flush)	2,634,930
Net Precipitation on Storage Surfaces	3,576,480
Stacking Pad Runoff Collected*	148,050
TOTAL:	**27,633,283**

PURPOSE OF THIS REPORT: This report documents review of plans and specifications for each structure or practice indicated below, including findings regarding the structure or practice's compliance with applicable standards. The reviewer considered if management and site assessment were conducted, documented, and reflected in the final design, and if proper construction and related plans (operation and maintenance, inspection, erosion control if applicable) were provided, and demonstrated compliance with applicable rules standards.

DECISION RECOMMENDATION: Based on my review completed on July 2, 2024, the proposed plans and specifications meet ch. NR 243, Wis. Adm. Code, and applicable NRCS Standards. Therefore, I recommend the plans and specifications be approved.

Anthony Salituro

Tony Salituro, EIT
Water Resources Engineer

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May 5, 2021

Fond Du Lac County
Approval

John Ruedinger
Ruedinger Farms Inc
W7222 Cemetary Rd
Van Dyne, WI 54979

SUBJECT: Conditional Approval of Ruedinger Farms Inc Nutrient Management Plan, WPDES Permit No. 0064386-03-0

Dear Mr. Ruedinger:

After completing a review of Ruedinger Farms Inc 2021-2025 Nutrient Management Plan (NMP) the Wisconsin Department of Natural Resources (Department) is providing conditional approval that it is consistent with Nutrient Management Requirements in s. NR 243, Wis. Adm. Code. This part of your WPDES permit application is now ready for the public notice and comment process as required by Ch. 283 Stats.

Before applying manure onto approved fields each season, the Department recommends Ruedinger Farms Inc review the NMP with those individuals involved with manure applications to ensure all remain familiar with the approved manure spreading protocol, spreading maps, field and map verification, record keeping requirements, and all the conditions of this approval. Specifically, some fields in Ruedinger Farms Inc may have:

- Soils that may have bedrock or groundwater within 24 inches of surface,
- Multiple setback areas due to streams, conduits to streams, grassed waterways, wetlands or wells, and
- Evidence of possible soil erosion/flow channels. Note: road ditches or other man made channels may be considered flow channels or conduits to navigable water and may be subject to a SWQMA and setback.

Reviewing the NMP and checking fields for these features and soil conditions prior to manure applications will help Ruedinger Farms Inc maintain compliance with their WPDES permit and Ch. NR 243 requirements.

FINDINGS OF FACT

The Department confirms that:

1. A current dairy herd size of 2,314 animal units (1,470 milking & dry cows, 350 heifers, and 228 calves). Currently there are no planned expansions in the next permit term.
2. Manure generation and spreading records indicate your herd will annually generate approximately 15,000,000 gallons of manure and process wastewater, 9,000 tons of sand, and 700 tons of solid manure in the first year of the permit term.
3. The use of application restriction options 1 and 5 within surface water quality management areas.
4. The use of phosphorus delivery method P Index.
5. That Ruedinger Farms Inc currently has 2,889 acres (710 owned and 2,179 controlled through contracts, rental agreements or leases, or under manure agreements) of which 2,799 are spreadable acres.

6. That some fields included in the NMP are directly adjacent to or have high potential to deliver nutrients and sediment to Anderson Creek (listed 303(d) impaired water by 'Total Phosphorus and TSS'), Van Dyne Creek (listed 303(d) impaired water by 'TSS'), and Lake Winnebago (listed 303(d) impaired water by 'PCB's, Mercury, Total Phosphorus, and TSS).
7. That no fields are directly adjacent to or have high potential to deliver nutrients and sediment to outstanding/exceptional waters.
8. That the following fields included in the NMP are located within the well head protection area for the Village of North Fond Du Lac: HJ-N, HJ-S, LB.E(81), JH W12, JH SE3.6, Sekao E38, Sekao W32, LBW(33.86), Sekao W28.
9. That Ruedinger Farms Inc currently has at least 328 days of storage for liquid manure, process wastewater and rainfall and at least 59 days of storage for solid manure.

	Maximum Operating Level (MOL) Volume
WSF 1	2,092,089gal
WSF 2	2,289,172gal
WSF 3	6,498,130gal
WSF 4	5,019,551gal

10. That 20 fields are tiled.

- DB7
- GH, M(75)
- H-02
- H-03
- H-04
- LB,E(81)
- LBW (33.86)
- PRB1
- PRB2
- PRB3
- PRB4
- PRD1
- PRD2
- PRD3
- PRE1
- PRE2
- PRE3-4-5
- PRE6
- PRE7
- PRE8

11. That all fields will be checked for the following features prior to/during manure or process wastewater applications: soil areas with possible shallow groundwater (i.e., within 24 inches of surface) at the time of manure application; required setbacks associated with wells, navigable waters, conduits to navigable waters, grassed waterways, wetlands, possible soil erosion/flow channels.
12. That surface applications of manure will not be completed when precipitation capable of producing runoff is forecasted within 24 hours of the time of planned application.

CONDITIONAL NUTRIENT MANAGEMENT PLAN APPROVAL

The Department hereby approves the 2021-2025 Ruedinger Farms Inc Nutrient Management Plan subject to the following conditions and the applicable requirements of Ch. NR 243, Wis. Adm. Code:

FIELD AND MANURE MANAGEMENT

1. Fields not included in the NMP and new fields shall not receive manure or process wastewater applications until they have been properly soil sampled, entered into Snap Plus, evaluated for their nutrient needs, and approved by the Department.

2. The following fields are prohibited from receiving applications of manure or process wastewater:

- PRE1 (>200ppm P)
- JS1 (default soil test)
- WH-04 (default soil test)
- WH-08A (default soil test)
- WH-14B (default soil test)
- WH-15 (default soil test)

- WH-01 (default soil test)
- DE1 (out of date soil test)
- JH SE3.6 (out of date soil test)
- JH W12 (out of date soil test)
- WH-08B (default soil test)
- MB1 (out of date soil test)
- MB2 (out of date soil test)
- RK10 (out of date soil test)
- BBR1 (out of date soil test)
- Sekao E38 (out of date soil test)
- Sekao W28 (out of date soil test)
- Sekao W32 (out of date soil test)

If Ruedinger Farms Inc wishes to use these fields for applications of manure or process wastewater all necessary information shall be submitted to the Department prior to application to demonstrate compliance with NR 243 and other applicable codes. Written Department approval amending this condition approval must be received prior to application.

3. If existing fields yield a soil test results greater than 200 ppm P, those fields would be prohibited from receiving manure or process wastewater applications, unless you obtain Department approval in accordance with NR 243.14(5)(b)2., Wis. Adm. Code.

4. All liquid manure samples collected may be analyzed, at a minimum, for percent dry matter, total nitrogen, percent NH_4-N, percent NO_3-N, phosphorus, potassium, and sulfur.

5. If manure sample results have a dry matter (DM) content less than 2.0% and the percent ammonium (NH_4^+) is greater than 75% of the total N, Ruedinger Farms Inc may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

$$\text{First-Year Available N} = NH_4\text{-N} + [0.25 \times (\text{Total N} - NH_4\text{-N})]$$

6. Ruedinger Farms Inc shall record daily manure applications by using form "Manure, Industrial Waste, Municipal Waste, Biosolids Spread Log". These forms shall be retained at the farm and provided to the department upon request.

7. Ruedinger Farms Inc shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by using form 3200-123.

WINTER SPREADING

8. Liquid manure applications during winter conditions, as defined by NR 243.14(7), Wis. Adm. Code, are prohibited with the exception of emergency applications.

9. The following field(s) are approved for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:

- Bob 01
- Bob 02
- Bob 03
- Bob 04
- Bob 06
- RK2
- Bob 11
- Jim 01
- Jim 02
- DB7
- JM1
- GH.M.75
- JM2
- MB2
- PRS3
- SR3
- PRR2

10. Winter spreading of solid and liquid manure may not occur during the "high risk runoff period" pursuant to s. NR 243.14(6)(c) and NR 243.14(7)(c), respectively.

11. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.

12. Liquid applications shall be limited to 3,500 gallons per acre or 30 lbs. P per acre, whichever is less, on slopes 2-6% and 7,000 gallons per acre or 60 lbs. P per acre, whichever is less, on slopes 0-2%. Winter applications of solid manure shall be limited to 60 lbs. P per acre.

HEADLAND STACKING

13. No headland stacking sites are approved.

MANURE & PROCESS WASTEWATER IRRIGATION

14. Irrigation of manure or process wastewater is prohibited.

SUBMITAL AND RECORDKEEPING REQUIREMENTS

15. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.

This conditional approval does not limit the Department's regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance with NR 243 and your WPDES permit conditions. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity.

Please keep in mind that approval by the Department of Natural Resources – Runoff Management Program does not relieve you of obligations to meet all other applicable federal, state or locate permits, zoning and regulatory requirements.

If you have any questions regarding this approval I can be reached at 715-839-3775 or Aaron.Orourke@Wisconsin.gov.

Sincerely,

Aaron O'Rourke
WDNR Nutrient Management Program Coordinator
Wisconsin Department of Natural Resources

cc: Victoria Ziegler, WDNR Agricultural Runoff Specialist (Victoria.Ziegler@Wisconsin.gov)
Benjamin Benninghoff, WDNR Watershed Field Supervisor (Benjamin.Benninghoff@Wisconsin.gov)

Chris Clayton, WDNR Ag Runoff Section Chief (Chrisopherr.Clayton@Wisconsin.gov)
Ashley Scheel, WDNR CAFO NMP Reviewer (Ashley.Scheel@Wisconsin.gov)
Tony Salituro, WDNR Intake Specialist (Anthony.Salituro@Wisconsin.gov)
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George Leroux, Country Visions Coop (gleroux@cvcoop.com)
File

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
PO Box 7185
101 S. Webster Street
Madison WI 53707-7185

Tony Evers, Governor
Preston D. Cole, Secretary
Telephone 608-266-2621
FAX 608-267-3579
TTY Access via relay - 711

May 12, 2021

FILE REF: R-2020-0135
WPDES Permit #: WI-0064386

John Ruedinger
Ruedinger Farms Inc
W7222 Cemetary Rd
Van Dyne, WI 54979

Subject: Evaluation Review for Days of Storage for Ruedinger Farms Inc, NW¼ Sec 18, T16N, R17E, Friendship Township, Fond Du Lac County – NO ADDITIONAL ACTION REQUIRED

Dear Mr. Ruedinger:

This letter is to inform you that the Wisconsin Department of Natural Resources (Department) has completed its review of the calculation of days of storage submitted under certification by Clark Fox, P.E., Roach and Associates LLC on June 25, 2020 with revisions received on May 11, 2021 on behalf of Ruedinger Farms Inc.

The Department reviewed the submitted calculations in accordance with s. NR 243.16(1)(c), Wis. Adm. Code. Under s. NR 243.16(3), Wis. Adm. Code, the Department may require additional practices, conditions, or permittee actions based on Department review of the submitted evaluation. For the following liquid manure storage calculations, the Department has determined **no additional actions** on your part are required.

Days of Available Liquid Waste Storage: The submitted information states that Ruedinger Farms Inc has 281 days of liquid waste storage based on the volumes listed in the table below with respect to s. NR 243.15(3)(i) to (k), Wis. Adm. Code. The current number of animal units provided for the calculation is 2,272. The liquid waste volumes are based on the NRCS spreadsheet and other estimated or calculated values and a collection period of 365 days. All runoff during the months of November through April is collected from the feed storage area. Feed storage runoff during the remaining months is transferred to a VTA.

Total Liquid Waste Storage:	18,554,396 gallons
Total Solids Storage	0 gallons
Total 25-yr, 24-hr Precip. on Storage	604,772 gallons
Total 25-yr, 24-hr Collected Runoff	363,961 gallons
Total Freeboard Vol.	1,558,341 gallons
Total MOL Liquid Waste Storage:	**16,027,322 gallons**

Manure and Bedding:	17,262,675 gallons
Parlor Wastewater	0 gallons
Total Feed Storage Leachate:	203,508 gallons
Total Feed Storage Runoff (Nov-Apr.) Collected:	668,980 gallons
Total Feedlot Runoff Collected:	0 gallons
Net Precipitation on Storage Surfaces:	2,691,696 gallons
Total Liquid Waste Stored Below the MOL	**20,826,859 gallons**

Should you have any questions, please contact Tony Salituro, DNR Madison office or your regional CAFO Specialist.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to WIS. STAT. §§ 227.52 and 227.53, you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to WIS. STAT. § 227.42, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with WIS. ADMIN. CODE § NR 2.05(5), and served on the Secretary in accordance with WIS. ADMIN. CODE § NR 2.03. The filing of a request for a contested case hearing does not extend the 30-day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

Bernie Michaud

Bernie Michaud, P.E.
CAFO Engineer Supervisor
Watershed Management Program

Anthony Salituro

Tony Salituro, E.I.T.
Engineering Intern
Watershed Management Program

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